



**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

PROGRAMME: BSC ABE 4
BSC AS 4

COURSE CODE: ABE 405

TITLE OF PAPER: SANITATION AND WASTE MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: NONE

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO
OTHER QUESTIONS.

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GRANTED BY THE CHIEF INVIGILATOR**

SECTION A. COMPULSORY QUESTION

Question One

- a. Poor sanitation is a common problem in most developing countries in the world. Discuss at least two causes for the condition and the related impacts.

20 marks

- b. Choose two of the elements of waste management and describe how you would apply them to solve the sanitation problems described in part (a).

20 marks

SECTION B. ANSWER ANY TWO QUESTIONS

Question Two

- a. Describe two health problems that are related to poor management of clinical waste.

10 marks

- b. Using examples, describe the link between water, sanitation and health.

10 marks

- c. Describe the different methods used for cost recovery in waste management.

10 marks

Question Three

- a. Discuss the potential hazards for the following types of waste and describe the recommended ways of disposing such waste;

i. Used oil /10

ii. Domestic waste /10

iii. Laboratory waste /10

30 marks

Question Four

- a. Explain what biogas is and what is it important for? **5 marks**

- b. What is sustainable waste management and why is it important? **5 marks**

- c. Describe how sewage waste is treated and disposed when using a septic tank?
10 marks

- b. Explain how a land fill is different from a dump site? Include the elements of environmental protection in your answer. **10 marks**